

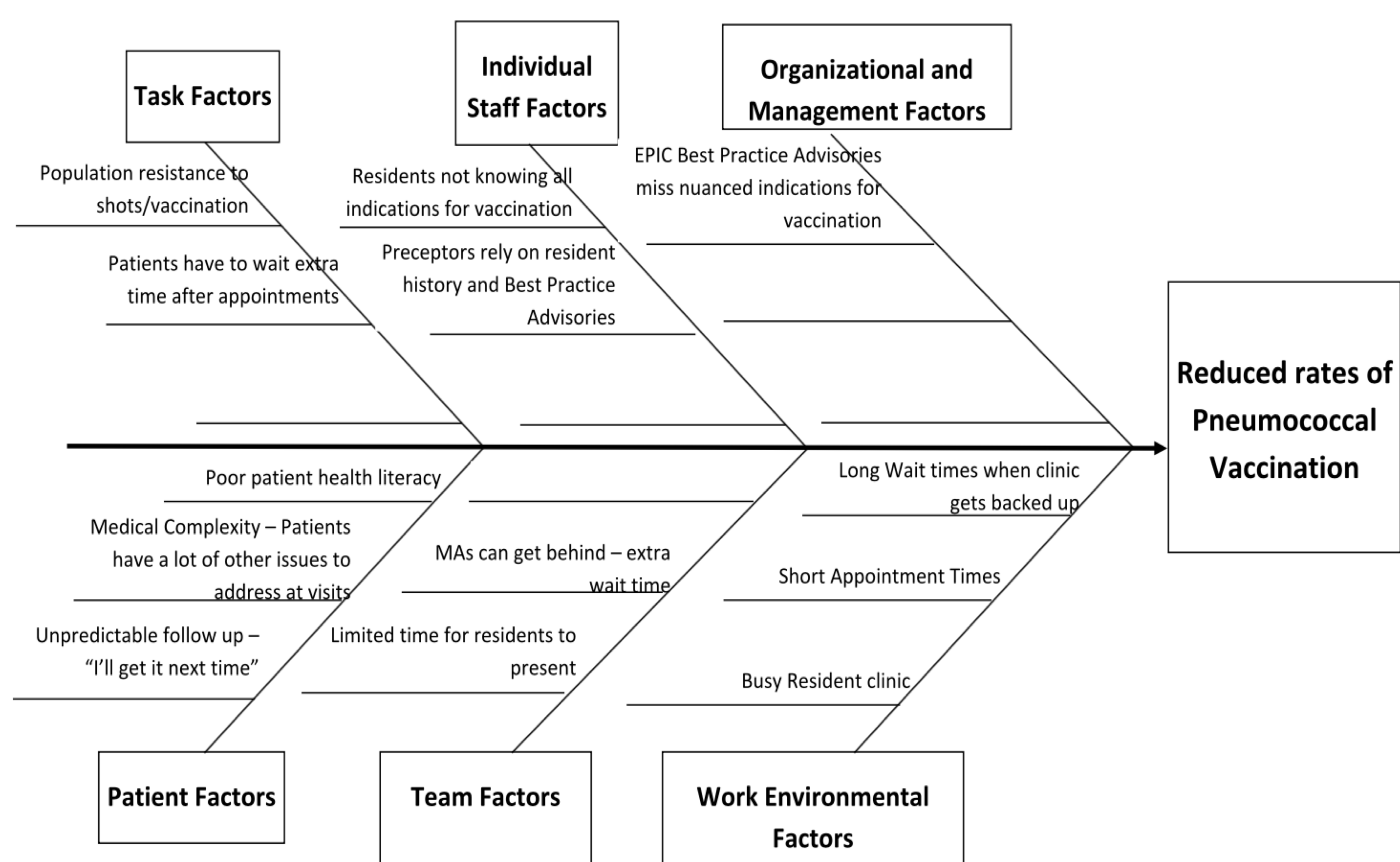
Improving Outpatient Pneumococcal Vaccination Rates in Patients age <65

Evan Nardone MD, Mark Mallozzi MD, Alvin George MD, Christine Kurian MD, Omar Safdar, MD, Timothy Kuchera MD
Internal Medicine, Thomas Jefferson University Hospital

BACKGROUND

- Pneumococcal infections are a significant source of morbidity and mortality in older adults and at-risk populations
- The CDC recommends pneumococcal vaccination for all patients >65 years of age, and those ages 19-64 with certain medical conditions
- Nursing/MA driven vaccination ordering protocols are effective for age-related indications for vaccination but can be limited when indications require extensive history taking
- In the context of a time-constrained office visit with multiple acute and chronic medical problems that need to be addressed, it can be difficult to remember all of the indications for pneumococcal vaccination which can lead to low rates of pneumococcal vaccination in indicated patients especially in the 19-64 age group
- Baseline Pneumococcal Vaccination Rates at JHAP for patients age 19-64 was ~55% at the start of the year 2020
- Literature Review showed similar issues with pneumococcal vaccination rates in this population in resident clinics^{2,3}
- QI initiatives in resident clinics have proven effective to improve pneumococcal vaccination rates in this target group³

ROOT CAUSE ANALYSIS



- Surveys conducted of a limited sample size of Residents Identified Provider Knowledge of indication for vaccination as a potential major barrier to vaccination
 - 28.5% of surveyed residents were able to identify at least 3/7 indications for PPSV23 vaccination alone
 - 14.3% of surveyed residents were able to identify at least 3/7 indications for PSV13 vaccination followed by PPSV23 vaccination

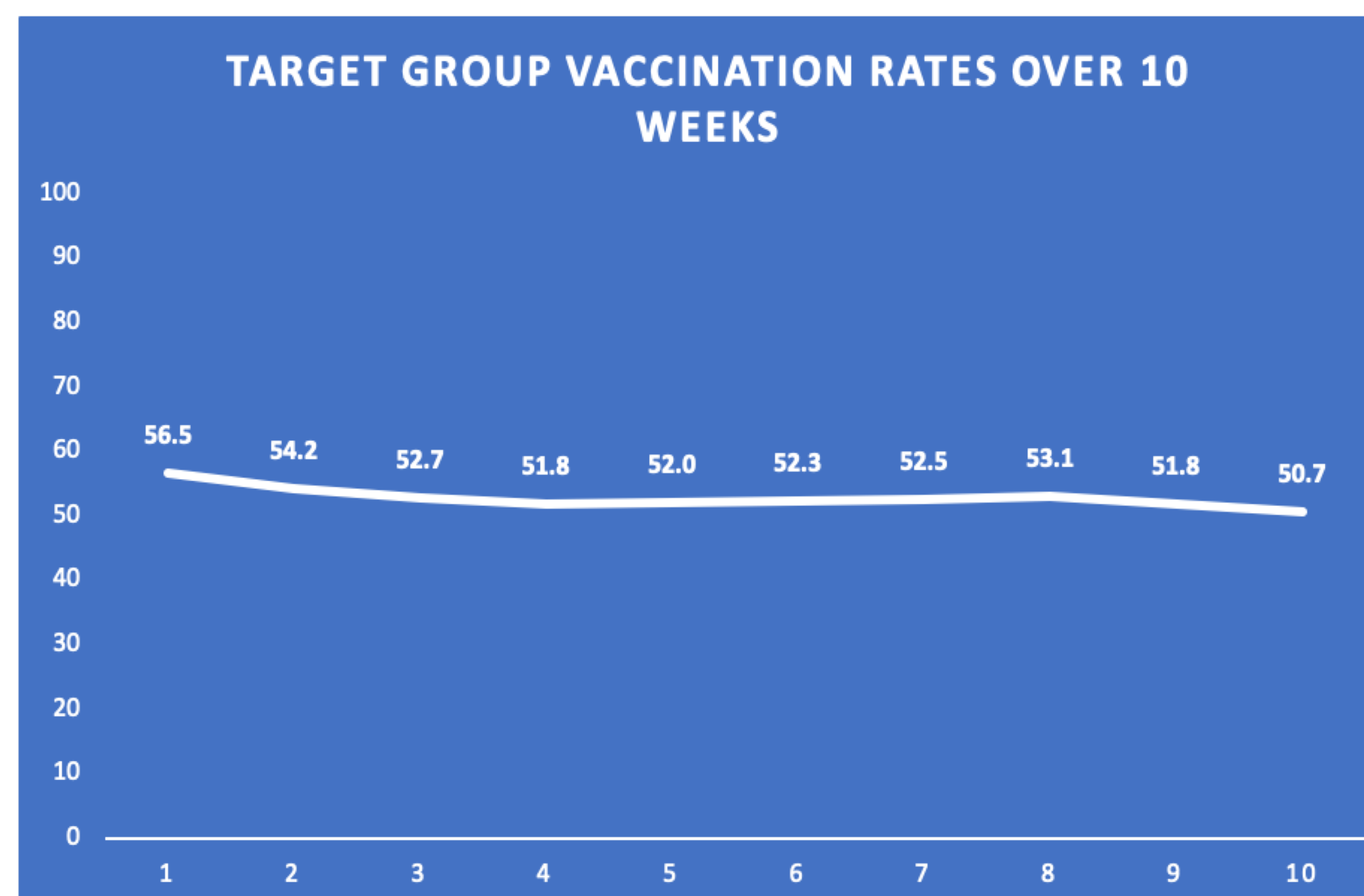
OBJECTIVES

- To increase pneumococcal vaccination rates for patients 19-64 at JHAP to reach 70% over 3 months.
- To increase resident knowledge of indications for pneumococcal vaccination in patients 19-64 by 25% over 3 months

INTERVENTION

- To target both of the above aims, our group created comprehensive health maintenance dot phrases in EPIC
- These dot phrases included all indications and vaccination schedules for Pneumococcal Vaccination in accordance with CDC guidelines¹
- In order to encourage use during implementation, these dot phrases were made for both male and female patients and were designed to be inclusive of all common health maintenance vaccinations and screenings
- At the start of each week during intervention, these dot phrases were shared with each group of residents starting their ambulatory block
- Instructions for use were provided via email
- Both male and female health maintenance dot phrases included the below information regarding pneumococcal vaccination for patients age 19-64:
 - PPSV23 if: smoker, long-term facility resident, heart disease, lung disease, liver disease, Diabetes, alcoholism
 - PSV13 followed by PPSV23 at 8 weeks and 5 years if: HIV, immunocompromised, nephrotic syndrome, chronic kidney disease, asplenia
 - PSV13 followed by PPSV23 at 8 weeks if: cochlear implant, CSF leaks

RESULTS



- We deferred repeating survey after intervention to assess resident knowledge of indications for vaccination due to low outpatient volumes and dot phrase utilization.

DISCUSSION

- Unfortunately, we were unable to achieve our first objective
- We believe that implementation of our intervention was severely impacted by the COVID-19 pandemic
- In-person volumes at JHAP have been significantly decreased
- Telehealth visits do not allow for vaccinations to be administered in clinic
- We determined that low utilization of our dot phrase made improvement in resident knowledge of indications unlikely to be attributable to our intervention
- We maintain based on our pre-intervention survey data that provider knowledge of indication for vaccination in our target group is a major barrier to vaccination in Resident clinics
- We hope that our dot phrases will be utilized in the future as a tool to help educate residents and improve compliance with health maintenance recommendations

1. CDC recommendations. www.cdc.gov/vaccines/vpd/pneumo/hcp/recommendations
 2. Trovato et al. Vaccination Rates in Patient with Medical Indications for the Pneumococcal Polysaccharide Vaccine in a Family Medicine Clinic. Journal of Pharmacy Practice. 2017.
 3. Jolin et al. Using an Inpatient Quality Improvement Curriculum for Internal Medicine Residents to Improve Pneumococcal Conjugate Vaccine Administration Rates. The Joint Commission Journal on Quality and Patient Safety. 2018.